



Winston H. Hickox
Secretary for
Environmental
Protection

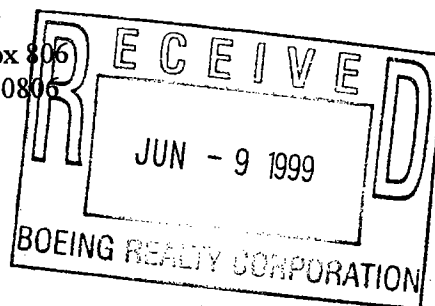
Department of Toxic Substances Control

Edwin F. Lowry, Director
400 P Street, 4th Floor, P.O. Box 806
Sacramento, California 95812-0806



Gray Davis
Governor

June 4, 1999



Mr. S. Mario Stavale
Boeing Realty Corporation
4060 Lakewood Boulevard, 6th Floor
Long Beach, California 90808

Dear Mr. Stavale:

BOEING C-6 FACILITY, PARCEL B, LOS ANGELES, CALIFORNIA
CONTRACT # 98-T1681

The Department of Toxic Substances Control (DTSC) has completed the review of the Parcel B Supplemental Site Investigation Report Addendum (April 16, 1999) prepared by Integrated Environmental Services, Inc. Attached are the comments by Dr. Yugal Luthra of the Human and Ecological Risk Division of DTSC. The report is acceptable to DTSC as submitted, and DTSC agrees with the conclusion of the report that there are no levels of contamination in the Building 4 area which would require remediation.

If you have any questions or comments, please contact me at (916) 327-2495.

Sincerely,

Deborah Oudiz, Ph.D.
Senior Toxicologist
Southern California Unit
Human and Ecological Risk Division

Enclosure

cc: Mr. Michael Young
Integrated Environmental Services, Inc.
3990 Westerly Place, Suite 210
Newport Beach, California 92660

Mr. Mario Stavale

June 4, 1999

Page 2

Mr. Augustine Anijelo
Regional Water Quality Control Board-
Los Angeles Region
101 Centre Plaza Drive
Monterey Park, California 91754-7500



Winston H. Hickox
Secretary for
Environmental
Protection

Department of Toxic Substances Control

Edwin F. Lowry, Director
400 P Street, 4th Floor, P.O. Box 806
Sacramento, California 95812-0806



Gray Davis
Governor

MEMORANDUM

TO: Deborah Oudiz, PhD
Senior Toxicologist
Science, Pollution Prevention, and Technology Development
Human and Ecological Risk Division

FROM: Yugal K. Luthra, PhD MRSC MIBiol
Staff Toxicologist
Science, Pollution Prevention, and Technology Development
Human and Ecological Risk Division (HERD)

DATE: May 20, 1999

SUBJECT: Boeing Realty Corporation, Parcel B (C6 Facility) Supplemental
Investigation Report (Addendum).
PCA Code:12185, Site Code:900138, Work Phase:00

BACKGROUND

In an earlier memorandum (March 9, 1999) issued by HERD, it was noted that the only remaining structure within Parcel B (Building 4) was due for demolition, and that after demolition the building footprints would be sampled for the presence of contaminants. The results of the analytical data were to be used to characterize risk from the contaminants within this area. Present comments relate to evaluating risk following the demolition, and sampling activities associated with building 4. Issues relating to potential groundwater contamination have not been addressed.

Building 4, a 3,000 square foot structure, used to house electric equipment, and was also used as a battery storage and recharge area.

DOCUMENT(S) REVIEWED

Parcel B Supplemental Site Investigation Report Addendum. Boeing Reality Corporation C-6 Facility, Los Angeles. The report was prepared by Integrated Environmental Services Inc., Newport Beach, California, and dated April 16, 1999.

SCOPE OF REVIEW

The referenced document was reviewed for scientific and technical contents. Any grammatical or typographic errors, which did not affect the interpretation of results, were not noted. Site characterization data, when provided, are reviewed by HERD to examine their applicability to the risk assessment process. Therefore, it is assumed that verification and validation of data, for the extent and magnitude of contamination, have been conducted by the appropriate staff in the Department.

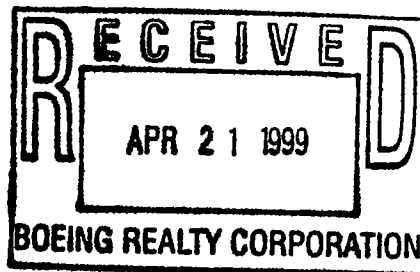
GENERAL COMMENTS

The analytical results presented for metals (Table A-3), and in the "Laboratory Reports" Section of the report reveal no discrepancies for metals and PCBs. The PCB analytical results show that essentially the contaminant is below the limit of detection. For metals detected in the soil, the appropriate reference should be provided which substantiates the reported health based remediation goals (HBRGs) under non-residential scenario. On the basis of the condition that the metal HBRGs are correctly reported, and under non-residential land use scenario, HERD agrees with the conclusion that soil samples from building 4 did not contain levels of contaminants (metals and PCBs) to warrant remediation. HERD has also noted that the data generated during the investigation of Parcel B of the C6 facility will be used to support any future risk-based multimedia/multipathway remediation.

CONCLUSIONS

The information and data, under the stated condition above, and as presented in the supplemental site investigation report, for evaluating risk due to contamination of soil only, were adequately presented. The report is acceptable.

If you may have any questions, please, contact me at (916)327-2512.



INTEGRATED
Environmental Services, Inc.

April 20, 1999

S. Mario Stavale
Boeing Realty Company
4060 Lakewood Boulevard, 6th Floor
Long Beach, California 90808-1700

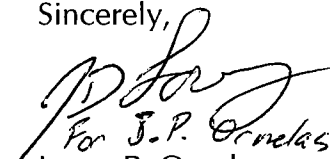
Subject: Boeing C-6, Parcel B, Los Angeles, CA

Dear Mario:

Enclosed please find the results from Orange Coast Analytical for the analyses of soil samples collected in Building 4, Parcel B of the Boeing C6 facility during the Parcel B Supplemental Site Investigation.

Integrated has reviewed the invoice to ensure billing is consistent with the contracted unit cost. All invoices are now sent directly from OCA to Boeing per Mila Ramsey's request. If you have questions concerning these invoices, please contact me at (714) 852-9050, extension 14.

Sincerely,


For J.P. Ornelas
Joann P. Ornelas
Program Manager

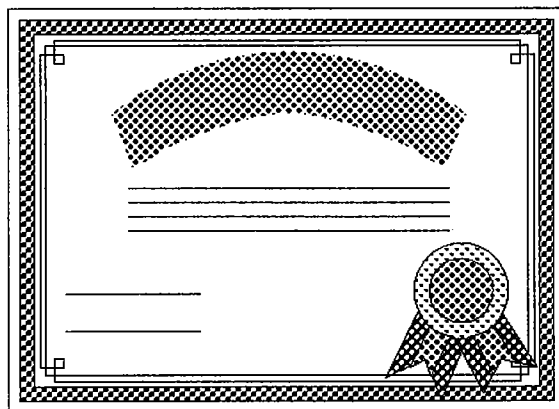
Enclosure



ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970



ORANGE COAST ANALYTICAL THANKS YOU FOR YOUR BUSINESS

THE FOLLOWING PAGES ARE THE ANALYSIS REPORT

ON THE SAMPLES YOU REQUESTED.

IF YOU HAVE ANY QUESTIONS REGARDING THIS REPORT

PLEASE FEEL FREE TO CONTACT US.



ORANGE COAST ANALYTICAL, INC.

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

LABORATORY REPORT FORM

Laboratory Name: ORANGE COAST ANALYTICAL, INC.

Address: 3002 Dow Suite 532 Tustin, CA 92780

Telephone: (714) 832-0064

Laboratory Certification

(ELAP) No.: 1416

Expiration Date: 2001

Laboratory Director's Name (Print) : Mark Noorani

Client: Integrated Environmental

Project No.:

Project Name: Bldg 4, AOI4, BRC

Laboratory Reference: IES 10821

Analytical Method: Metals, pH, PCB's

Date Sampled: 03/31/99

Date Received: 03/31/99

Date Reported: 04/01/99

Sample Matrix: Soil & Water

Chain of Custody Received: Yes

Laboratory Director's Signature: 

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Soil, AOI4A-B2-1-5.5

Laboratory Sample #: 99030257

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 04/01/99

Reported: 04/01/99

POLYCHLORINATED BIPHENYL'S (EPA 8080)

ANALYTE	CAS NUMBER	DETECTION LIMIT µg/kg	SAMPLE RESULTS µg/kg
PCB-1016	12674-11-2	20	N.D.
PCB-1221	111104-28-2	20	N.D.
PCB-1232	11141-16-5	20	N.D.
PCB-1242	53469-21-9	20	N.D.
PCB-1248	12672-29-6	20	N.D.
PCB-1254	11097-69-1	20	N.D.
PCB-1260	11096-82-5	20	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical, Inc.

BOE-C6-0070502

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Soil, AOI4A-B5-2-9.5

Laboratory Sample #: 99030258

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 04/01/99

Reported: 04/01/99

POLYCHLORINATED BIPHENYL'S (EPA 8080)

ANALYTE	CAS NUMBER	DETECTION LIMIT µg/kg	SAMPLE RESULTS µg/kg
PCB-1016	12674-11-2	20	N.D.
PCB-1221	111104-28-2	20	N.D.
PCB-1232	11141-16-5	20	N.D.
PCB-1242	53469-21-9	20	N.D.
PCB-1248	12672-29-6	20	N.D.
PCB-1254	11097-69-1	20	N.D.
PCB-1260	11096-82-5	20	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical, Inc.

BOE-C6-0070503

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Soil, AOI4A-B8-1-5.5

Laboratory Sample #: 99030259

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 04/01/99

Reported: 04/01/99

POLYCHLORINATED BIPHENYL'S (EPA 8080)

ANALYTE	CAS NUMBER	DETECTION LIMIT µg/kg	SAMPLE RESULTS µg/kg
PCB-1016	12674-11-2	20	N.D.
PCB-1221	111104-28-2	20	N.D.
PCB-1232	11141-16-5	20	N.D.
PCB-1242	53469-21-9	20	N.D.
PCB-1248	12672-29-6	20	N.D.
PCB-1254	11097-69-1	20	N.D.
PCB-1260	11096-82-5	20	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical, Inc.

BOE-C6-0070504

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Water, AOI4A-Rinsate-1

Laboratory Sample #: 99030260

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 04/01/99

Reported: 04/01/99

POLYCHLORINATED BIPHENYL'S (EPA 8080)

ANALYTE	CAS NUMBER	DETECTION LIMIT µg/l	SAMPLE RESULTS µg/l
PCB-1016	12674-11-2	5.0	N.D.
PCB-1221	111104-28-2	5.0	N.D.
PCB-1232	11141-16-5	5.0	N.D.
PCB-1242	53469-21-9	5.0	N.D.
PCB-1248	12672-29-6	5.0	N.D.
PCB-1254	11097-69-1	5.0	N.D.
PCB-1260	11096-82-5	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical, Inc.

BOE-C6-0070505

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC
Client Project #:

Sample Description: Soil, AOI4A-C1/B1,2,3-1-1
Laboratory Sample #: 99030261
Laboratory Reference #: IES 10821

Sampled: 03/31/99
Received: 03/31/99
Analyzed: 04/01/99
Reported: 04/01/99

POLYCHLORINATED BIPHENYL'S (EPA 8080)

ANALYTE	CAS NUMBER	DETECTION LIMIT µg/kg	SAMPLE RESULTS µg/kg
PCB-1016	12674-11-2	20	N.D.
PCB-1221	111104-28-2	20	N.D.
PCB-1232	11141-16-5	20	N.D.
PCB-1242	53469-21-9	20	N.D.
PCB-1248	12672-29-6	20	N.D.
PCB-1254	11097-69-1	20	N.D.
PCB-1260	11096-82-5	20	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical, Inc.

BOE-C6-0070506

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Soil, AOI4A-C2/B1,2,3-2-5

Laboratory Sample #: 99030262

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 04/01/99

Reported: 04/01/99

POLYCHLORINATED BIPHENYL'S (EPA 8080)

ANALYTE	CAS NUMBER	DETECTION LIMIT µg/kg	SAMPLE RESULTS µg/kg
PCB-1016	12674-11-2	20	N.D.
PCB-1221	111104-28-2	20	N.D.
PCB-1232	11141-16-5	20	N.D.
PCB-1242	53469-21-9	20	N.D.
PCB-1248	12672-29-6	20	N.D.
PCB-1254	11097-69-1	20	N.D.
PCB-1260	11096-82-5	20	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Orange Coast Analytical, Inc.

BOE-C6-0070507

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC
Client Project #:

Sample Description: Soil, AOI4A-C3/B4,5,6-1-1
Laboratory Sample #: 99030263
Laboratory Reference #: IES 10821

Sampled: 03/31/99
Received: 03/31/99
Analyzed: 04/01/99
Reported: 04/01/99

POLYCHLORINATED BIPHENYL'S (EPA 8080)

ANALYTE	CAS NUMBER	DETECTION LIMIT µg/kg	SAMPLE RESULTS µg/kg
PCB-1016	12674-11-2	20	N.D.
PCB-1221	111104-28-2	20	N.D.
PCB-1232	11141-16-5	20	N.D.
PCB-1242	53469-21-9	20	N.D.
PCB-1248	12672-29-6	20	N.D.
PCB-1254	11097-69-1	20	N.D.
PCB-1260	11096-82-5	20	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Soil, AOI4A-C4/B4,5,6-2-5

Laboratory Sample #: 99030264

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 04/01/99

Reported: 04/01/99

POLYCHLORINATED BIPHENYL'S (EPA 8080)

ANALYTE	CAS NUMBER	DETECTION LIMIT µg/kg	SAMPLE RESULTS µg/kg
PCB-1016	12674-11-2	20	N.D.
PCB-1221	111104-28-2	20	N.D.
PCB-1232	11141-16-5	20	N.D.
PCB-1242	53469-21-9	20	N.D.
PCB-1248	12672-29-6	20	N.D.
PCB-1254	11097-69-1	20	N.D.
PCB-1260	11096-82-5	20	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Soil, AOI4A-C5/B7,8,9-1-1

Laboratory Sample #: 99030265

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 04/01/99

Reported: 04/01/99

POLYCHLORINATED BIPHENYL'S (EPA 8080)

ANALYTE	CAS NUMBER	DETECTION LIMIT µg/kg	SAMPLE RESULTS µg/kg
PCB-1016	12674-11-2	20	N.D.
PCB-1221	111104-28-2	20	N.D.
PCB-1232	11141-16-5	20	N.D.
PCB-1242	53469-21-9	20	N.D.
PCB-1248	12672-29-6	20	N.D.
PCB-1254	11097-69-1	20	N.D.
PCB-1260	11096-82-5	20	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC
Client Project #:

Sample Description: Soil, AOI4A-C6/B7,8,9-2-5
Laboratory Sample #: 99030266
Laboratory Reference #: IES 10821

Sampled: 03/31/99
Received: 03/31/99
Analyzed: 04/01/99
Reported: 04/01/99

POLYCHLORINATED BIPHENYL'S (EPA 8080)

ANALYTE	CAS NUMBER	DETECTION LIMIT µg/kg	SAMPLE RESULTS µg/kg
PCB-1016	12674-11-2	20	N.D.
PCB-1221	111104-28-2	20	N.D.
PCB-1232	11141-16-5	20	N.D.
PCB-1242	53469-21-9	20	N.D.
PCB-1248	12672-29-6	20	N.D.
PCB-1254	11097-69-1	20	N.D.
PCB-1260	11096-82-5	20	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Soil, AOI4A-B10-1-0.5

Laboratory Sample #: 99030252

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 04/01/99

Reported: 04/01/99

CCR - METALS

ANALYTE	EPA METHOD	DETECTION LIMIT <i>mg/kg</i>	SAMPLE RESULTS <i>mg/kg</i>
Antimony	6010	5.0	N.D.
Arsenic	6010	1.0	3.8
Barium	6010	0.5	180
Beryllium	6010	0.5	0.69
Cadmium	6010	0.5	0.21
Chromium (Total)	6010	0.5	22
Chromium (VI)	7196	0.5	N.D.
Cobalt	6010	0.5	9.5
Copper	6010	0.5	23
Lead	6010	1.0	5.7
Mercury	7471	0.1	N.D.
Molybdenum	6010	1.0	N.D.
Nickel	6010	0.5	22
Selenium	6010	5.0	N.D.
Silver	6010	0.5	N.D.
Thallium	6010	5.0	N.D.
Vanadium	6010	0.5	43
Zinc	6010	0.5	49

Analytes reported as N.D. were not present above the stated limit of detection.

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Soil, AOI4A-B10-2-5

Laboratory Sample #: 99030253

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 04/01/99

Reported: 04/01/99

CCR - METALS

ANALYTE	EPA METHOD	DETECTION LIMIT mg/kg	SAMPLE RESULTS mg/kg
Antimony	6010	5.0	N.D.
Arsenic	6010	1.0	5.4
Barium	6010	0.5	160
Beryllium	6010	0.5	0.61
Cadmium	6010	0.5	N.D.
Chromium (Total)	6010	0.5	24
Chromium (VI)	7196	0.5	N.D.
Cobalt	6010	0.5	11
Copper	6010	0.5	32
Lead	6010	1.0	5.9
Mercury	7471	0.1	N.D.
Molybdenum	6010	1.0	N.D.
Nickel	6010	0.5	21
Selenium	6010	5.0	N.D.
Silver	6010	0.5	N.D.
Thallium	6010	5.0	N.D.
Vanadium	6010	0.5	51
Zinc	6010	0.5	63

Analytes reported as N.D. were not present above the stated limit of detection.

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Soil, AOI4A-B10-3-10

Laboratory Sample #: 99030254

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 04/01/99

Reported: 04/01/99

CCR - METALS

ANALYTE	EPA METHOD	DETECTION LIMIT <i>mg/kg</i>	SAMPLE RESULTS <i>mg/kg</i>
Antimony	6010	5.0	N.D.
Arsenic	6010	1.0	6.3
Barium	6010	0.5	180
Beryllium	6010	0.5	0.68
Cadmium	6010	0.5	N.D.
Chromium (Total)	6010	0.5	25
Chromium (VI)	7196	0.5	N.D.
Cobalt	6010	0.5	12
Copper	6010	0.5	36
Lead	6010	1.0	6.5
Mercury	7471	0.1	N.D.
Molybdenum	6010	1.0	N.D.
Nickel	6010	0.5	21
Selenium	6010	5.0	N.D.
Silver	6010	0.5	N.D.
Thallium	6010	5.0	N.D.
Vanadium	6010	0.5	54
Zinc	6010	0.5	71

Analytes reported as N.D. were not present above the stated limit of detection.

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Soil, AOI4A-B10-4-15D

Laboratory Sample #: 99030255

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 04/01/99

Reported: 04/01/99

CCR - METALS

ANALYTE	EPA METHOD	DETECTION LIMIT <i>mg/kg</i>	SAMPLE RESULTS <i>mg/kg</i>
Antimony	6010	5.0	N.D.
Arsenic	6010	1.0	4.1
Barium	6010	0.5	170
Beryllium	6010	0.5	0.67
Cadmium	6010	0.5	N.D.
Chromium (Total)	6010	0.5	23
Chromium (VI)	7196	0.5	N.D.
Cobalt	6010	0.5	12
Copper	6010	0.5	32
Lead	6010	1.0	6.2
Mercury	7471	0.1	N.D.
Molybdenum	6010	1.0	N.D.
Nickel	6010	0.5	19
Selenium	6010	5.0	N.D.
Silver	6010	0.5	N.D.
Thallium	6010	5.0	N.D.
Vanadium	6010	0.5	55
Zinc	6010	0.5	72

Analytes reported as N.D. were not present above the stated limit of detection.

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Soil, AOI4A-B10-4-15

Laboratory Sample #: 99030256

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 04/01/99

Reported: 04/01/99

CCR - METALS

ANALYTE	EPA METHOD	DETECTION LIMIT <i>mg/kg</i>	SAMPLE RESULTS <i>mg/kg</i>
Antimony	6010	5.0	N.D.
Arsenic	6010	1.0	4.1
Barium	6010	0.5	160
Beryllium	6010	0.5	0.71
Cadmium	6010	0.5	N.D.
Chromium (Total)	6010	0.5	25
Chromium (VI)	7196	0.5	N.D.
Cobalt	6010	0.5	11
Copper	6010	0.5	42
Lead	6010	1.0	6.4
Mercury	7471	0.1	N.D.
Molybdenum	6010	1.0	N.D.
Nickel	6010	0.5	19
Selenium	6010	5.0	N.D.
Silver	6010	0.5	N.D.
Thallium	6010	5.0	N.D.
Vanadium	6010	0.5	54
Zinc	6010	0.5	78

Analytes reported as N.D. were not present above the stated limit of detection.

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC

Client Project #:

Sample Description: Water, AOI4A-Rinsate-1

Laboratory Sample #: 99030260

Laboratory Reference #: IES 10821

Sampled: 03/31/99

Received: 03/31/99

Analyzed: 03/31-04/01/99

Reported: 04/01/99

CCR - METALS

ANALYTE	EPA METHOD	DETECTION LIMIT mg/l	SAMPLE RESULTS mg/l
Antimony	6010	0.1	N.D.
Arsenic	6010	0.1	N.D.
Barium	6010	0.01	N.D.
Beryllium	6010	0.01	N.D.
Cadmium	6010	0.01	N.D.
Chromium (Total)	6010	0.01	N.D.
Chromium (VI)	7196	0.01	N.D.
Cobalt	6010	0.01	N.D.
Copper	6010	0.01	N.D.
Lead	6010	0.05	N.D.
Mercury	7471	0.002	N.D.
Molybdenum	6010	0.05	N.D.
Nickel	6010	0.01	N.D.
Selenium	6010	0.1	N.D.
Silver	6010	0.01	N.D.
Thallium	6010	0.1	N.D.
Vanadium	6010	0.01	N.D.
Zinc	6010	0.01	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Integrated Environmental Services

Ms. Joann Ornelas
3990 Westerly Pl. Suite 210
Newport Beach, CA 92660

Client Project ID: Bldg 4, AOI4, BRC**Client Project #:****Sample Description:** Soil, Water**Laboratory Reference #:** IES 10821**Sampled:** 03/31/99**Received:** 03/31/99**Analyzed:** 03/31/99**Reported:** 04/01/99**pH (EPA 9045)**

**LABORATORY
SAMPLE
NUMBER****CLIENT
SAMPLE
NUMBER****SAMPLE
RESULTS**

99030252	AOI4A-B10-1-0.5	8.2
99030253	AOI4A-B10-2-5	8.9
99030254	AOI4A-B10-3-10	8.9
99030255	AOI4A-B10-4-15D	8.7
99030256	AOI4A-B10-4-15	8.8
99030260	AOI4-Rinsate-1	8.4

QC DATA REPORT

Analysis : PCB 'S (EPA 8080)

Date of Analysis :04/1/99

Laboratory Sample No :99030257

Laboratory Reference No : IES 10821

Analyte	R1 (ppb)	SP (ppb)	MS (ppb)	MSD (ppb)	PR1 %	PR2 %	RPD %
PCB-1260	0.0	250	160	150	64	60	6

Definition of Terms :

R1 Results Of First Analysis

SP Spike Concentration Added to Sample

MS Matrix Spike Results

MSD Matrix Spike Duplicate Results

PR1 Percent Recovery Of MS: $\{(MS-R1) / SP\} \times 100$

PR2 Percent Recovery Of MSD: $\{(MSD-R1) / SP\} \times 100$

RPD Relative Percent Difference: $\{(MS-MSD) / (MS+MSD)\} \times 100 \times 2$

QC DATA REPORT

Analysis : PCB 'S (EPA 8080)

Date of Analysis :04/01/99

Laboratory Sample No :OCA 100

Laboratory Reference No : IES 10821

Analyte	R1 (ppb)	SP (ppb)	MS (ppb)	MSD (ppb)	PR1 %	PR2 %	RPD %
PCB-1260	0.0	20	14	13	70	65	7

Definition of Terms :

R1 Results Of First Analysis

SP Spike Concentration Added to Sample

MS Matrix Spike Results

MSD Matrix Spike Duplicate Results

PR1 Percent Recovery Of MS: $\{(MS-R1) / SP\} \times 100$

PR2 Percent Recovery Of MSD: $\{(MSD-R1) / SP\} \times 100$

RPD Relative Percent Difference: $\{(MS-MSD) / (MS+MSD)\} \times 100 \times 2$

QC DATA REPORT

Analysis : Metals

Date of Analysis : 04/01/99

Laboratory Sample No : 99030252, OCA200

Laboratory Reference No : IES 10821

Analyte	R1 (ppm)	SP (ppm)	MS (ppm)	MSD (ppm)	PR1 %	PR2 %	RPD %
Antimony	0.00	10.0	9.48	9.60	95	96	1
Arsenic	0.08	10.0	9.90	9.93	98	99	0
Barium	3.67	5.00	8.44	8.39	95	94	1
Beryllium	0.01	1.00	1.07	1.06	106	105	1
Cadmium	0.00	1.00	1.04	1.04	104	104	0
Chromium (Total)	0.44	1.00	1.42	1.41	98	97	1
Chromium (VI)	0.0	5.0	4.6	4.3	92	86	7
Cobalt	0.19	1.00	1.16	1.16	97	97	0
Copper	0.47	1.00	1.54	1.55	107	108	1
Lead	0.11	5.00	4.64	4.65	91	91	0
Mercury	0.00	1.00	0.96	0.99	96	99	3
Molybdenum	0.00	5.00	4.95	4.96	99	99	0
Nickel	0.43	5.00	5.46	5.45	101	100	0
Selenium	0.00	10.0	9.88	9.95	99	100	1
Silver	0.00	5.00	5.21	5.21	104	104	0
Thallium	0.00	10.0	8.91	10.1	89	101	13
Vanadium	0.86	5.00	5.78	5.77	98	98	0
Zinc	0.99	1.00	1.94	1.93	95	94	1

Definition of Terms :

R1	Results Of First Analysis
SP	Spike Concentration Added to Sample
MS	Matrix Spike Results
MSD	Matrix Spike Duplicate Results
PR1	Percent Recovery Of MS: $\{(MS-R1) / SP\} \times 100$
PR2	Percent Recovery Of MSD: $\{(MSD-R1) / SP\} \times 100$
RPD	Relative Percent Difference: $\{(MS-MSD) / (MS+MSD)\} \times 100 \times 2$

QC DATA REPORT

Analysis : Metals

Date of Analysis : 03/31-04/01/99

Laboratory Sample No : 99030236, 99030229, 99030250

Laboratory Reference No : IES 10821

Analyte	R1 (ppm)	SP (ppm)	MS (ppm)	MSD (ppm)	PR1 %	PR2 %	RPD %
Antimony	0.00	0.10	0.103	0.105	103	105	2
Arsenic	0.00	0.10	0.107	0.104	107	104	3
Barium	0.03	0.100	0.129	0.128	99	98	1
Beryllium	0.00	0.100	0.104	0.103	104	103	1
Cadmium	0.00	0.100	0.096	0.095	96	95	1
Chromium (Total)	0.00	0.100	0.103	0.101	103	101	2
Chromium (VI)	0.00	0.50	0.50	0.50	100	100	0
Cobalt	0.00	0.100	0.094	0.093	94	93	1
Copper	0.000	0.100	0.105	0.104	105	104	1
Lead	0.00	0.10	0.096	0.092	96	92	4
Mercury	0.000	0.010	0.010	0.010	98	99	1
Molybdenum	0.00	0.10	0.114	0.114	114	114	0
Nickel	0.00	0.100	0.093	0.092	93	92	1
Selenium	0.00	0.10	0.108	0.105	108	105	3
Silver	0.00	0.100	0.099	0.098	99	98	1
Thallium	0.00	0.10	0.102	0.103	102	103	1
Vanadium	0.00	0.100	0.107	0.106	107	106	1
Zinc	0.00	0.100	0.098	0.097	98	97	1

Definition of Terms :

R1	Results Of First Analysis
SP	Spike Concentration Added to Sample
MS	Matrix Spike Results
MSD	Matrix Spike Duplicate Results
PR1	Percent Recovery Of MS: $\{(MS-R1) / SP\} \times 100$
PR2	Percent Recovery Of MSD: $\{(MSD-R1) / SP\} \times 100$
RPD	Relative Percent Difference: $\{(MS-MSD) / (MS+MSD)\} \times 100 \times 2$

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Lab Job No: _____
Page 2 of 2

REQUIRED TAT: 24 HR

CUSTOMER INFORMATION			PROJECT INFORMATION				ANALYSIS/METHOD REQUEST										REMARKS/PRECAUTIONS					
COMPANY:	SEND REPORT TO:		PROJECT NAME:	NUMBER:	LOCATION:	ADDRESS:	PHONE:	FAX:	SAMPLED BY:	PCB	EPA	8080	MOD	EPA	8080	MOD		EPA	8080	MOD		
HARDING LAWSON	J. ORNELAS - IES1		BLDG 4, 1014, BRC						V. MATHUR													
ADDRESS: 30 CORP PARK			LOCATION:			ADDRESS:			PCB			EPA			8080			MOD				
IRVINE CA									PCB			EPA			8080			MOD				
PHONE:			FAX:			SAMPLED BY:			PCB			EPA			8080			MOD				
SAMPLE ID			NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	PRES.											REMARKS/PRECAUTIONS			
AOI4-B5-2-9.5			1	3-31-99	1106	SOIL	1.5" BRSS	NONE														
AOI4-B6-1-5					1143														HOLD			
AOI4-B6-2-9					1148														HOLD			
AOI4-B7-1-8.5					1226														HOLD			
AOI4-B7-2-12.5					12:33														HOLD			
AOI4-B8-1-5.5					1246				X													
AOI4-B8-2-9.5					1253															HOLD		
AOI4-B9-1-5					1312															HOLD		
AOI4-B9-2-9			↓		1318	↓	↓	↓												HOLD		
AOI4-RINSATE-1			3		13:45	WATER	*	1 POLY HNO3	X	X	X											* 2 POLY, 1 AMBER
AOI4-C1/B1,2,3-1-1			1		1008	COMPOSITE SOIL	JAR 403	NONE	X													
AOI4-C2/B1,2,3-2-5			↓		1018	↓	↓	↓	X													
AOI4-C3/B4,5,6-1-1			↓		1143	↓	↓	↓	X													
AOI4-C4/B4,5,6-2-5			↓	↓	1148	↓	↓	↓	X													
Total No. of Samples: 14				Method of Shipment:																		
Relinquished By: <i>V. Mathur</i> Date/Time: 3/31/99 16:25				Received By:				Date/Time:				Reporting Format: (check)										
Relinquished By:				Received By:				Date/Time:				NORMAL _____ S.D. HMMD _____										
Relinquished By:				Received By:				Date/Time:				RWQCB _____ OTHER _____										
Relinquished By:				Received For Lab By: <i>on Varkman</i> Date/Time: 3-31-99 16:25				Sample Integrity: (check)														
Relinquished By:				Received For Lab By:				Date/Time:				intact _____ on ice _____										

Analysis Request and Chain of Custody Record



ORANGE COAST ANALYTICAL, INC.

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Lab Job No: _____
Page 1 of 3

REQUIRED TAT: 24 HR

CUSTOMER INFORMATION		PROJECT INFORMATION						ANALYSIS METHOD REQUEST										REMARKS/PRECAUTIONS
COMPANY: <u>Harding Lawson Associates</u>		PROJECT NAME: <u>BLDG 4, AOI 4, BRC</u>						<div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA METALS METHOD 8010</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">PH 7196 / 7271</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">PCB EPA 8045</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8080 MOD</div> </div>										
SEND REPORT TO: <u>J. Ornelas - IESI</u>		NUMBER: _____																
ADDRESS: <u>30 Corp Park</u>		LOCATION: _____																
<u>Irvine CA</u>		ADDRESS: _____																
PHONE: _____ FAX: _____		SAMPLED BY: <u>V. Mathur</u>																
SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	PRES.												
<u>AOI 4-B10-1-0.5</u>	<u>1</u>	<u>3-31-99</u>	<u>0800</u>	<u>SOIL</u>	<u>6" 15" BRASS</u>	<u>NONE</u>												
<u>AOI 4-B10-2-5</u>	<u>↓</u>	<u>↓</u>	<u>0810</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>X</u>	<u>X</u>										
<u>AOI 4-B10-3-10</u>	<u>↓</u>	<u>↓</u>	<u>0822</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>X</u>	<u>X</u>										
<u>AOI 4-B10-4-15D</u>	<u>↓</u>	<u>↓</u>	<u>0828</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>X</u>	<u>X</u>										
<u>AOI 4-B10-4-15</u>	<u>↓</u>	<u>↓</u>	<u>0831</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>X</u>	<u>X</u>										
<u>AOI 4-B1-1-7</u>	<u>↓</u>	<u>↓</u>	<u>0905</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>											<u>HOLD</u>	
<u>AOI 4-B1-2-11</u>	<u>↓</u>	<u>↓</u>	<u>0912</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>											<u>HOLD</u>	
<u>AOI 4-B2-1-5.5</u>	<u>↓</u>	<u>↓</u>	<u>0927</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>			<u>X</u>									
<u>AOI 4-B2-2-9.5</u>	<u>↓</u>	<u>↓</u>	<u>0933</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>											<u>HOLD</u>	
<u>AOI 4-B3-1-5.5</u>	<u>↓</u>	<u>↓</u>	<u>1008</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>											<u>HOLD</u>	
<u>AOI 4-B3-2-9.5</u>	<u>↓</u>	<u>↓</u>	<u>1018</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>											<u>HOLD</u>	
<u>AOI 4-B4-1-7</u>	<u>↓</u>	<u>↓</u>	<u>1035</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>											<u>HOLD</u>	
<u>AOI 4-B4-2-11</u>	<u>↓</u>	<u>↓</u>	<u>1040</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>											<u>HOLD</u>	
<u>AOI 4-B5-1-5.5</u>	<u>↓</u>	<u>↓</u>	<u>1059</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>											<u>HOLD</u>	
Total No. of Samples: <u>14</u>		Method of Shipment: _____																
Relinquished By: <u>V. Mathur</u> Date/Time: <u>3/31/99 16:25</u>		Received By: _____ Date/Time: _____		Reporting Format: (check) NORMAL _____ S.D. HMMD _____														
Relinquished By: _____ Date/Time: _____		Received By: _____ Date/Time: _____		RWQCB _____ OTHER _____														
Relinquished By: _____ Date/Time: _____		Received For Lab By: <u>Dr. Van Kuren</u> Date/Time: <u>3-31-99 16:25</u>		Sample Integrity: (check) intact _____ on ice _____														

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pickup samples.

Analysis Request and Chain of Custody Record

Lab Job No: _____
Page 3 of 3



ORANGE COAST ANALYTICAL, INC.

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REQUIRED TAT: 24 HR

CUSTOMER INFORMATION			PROJECT INFORMATION				ANALYSIS/METHOD REQUEST										REMARKS/PRECAUTIONS
COMPANY: <u>HARDING LAWSON</u>			PROJECT NAME: <u>BLOG 4, AOI 4, BRC</u>				<div style="writing-mode: vertical-rl; transform: rotate(180deg);"> PCB EPA 8080 Mod </div>										
SEND REPORT TO: <u>J. ORNELAS - IESI</u>			NUMBER: _____														
ADDRESS: <u>30 CORP PARK</u>			LOCATION: _____														
<u>IRVINE CA</u>			ADDRESS: _____														
PHONE: _____ FAX: _____			SAMPLED BY: <u>V. MATHUR</u>														
SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	PRES.											
<u>AOI 4-C5/87,8,9-1-1</u>	<u>1</u>	<u>3-31-99</u>	<u>1312</u>	<u>COMP. SOIL</u>	<u>JAR 4 OZ.</u>	<u>NONE</u>	<u>X</u>										
<u>AOI 4-C6/87,8,9-2-5</u>	<u>↓</u>	<u>↓</u>	<u>1318</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>X</u>										
<div style="font-size: 48px; opacity: 0.5;">X</div>																	
Total No. of Samples: <u>2</u>			Method of Shipment: _____														
Relinquished By: <u>V. Mathur</u> Date/Time: <u>3-31-99 16:25</u>			Received By: _____ Date/Time: _____				Reporting Format: (check) NORMAL _____ S.D. HMMD _____ RWQCB _____ OTHER _____										
Relinquished By: _____ Date/Time: _____			Received By: _____ Date/Time: _____				Sample Integrity: (check) intact _____ on ice _____										
Relinquished By: _____ Date/Time: _____			Received For Lab By: <u>[Signature]</u> Date/Time: <u>3-31-99 16:25</u>														

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pickup samples.